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US 4159261 A	US 4160762 A	US 4177187 A	US 4217258 A	US 4254017 A	Document ID
19790626	19790710	19791204	19800812	19810303	Issue Date
10	10	8	15	26	Pages
Stabilization of vinyl halide resins	Halogen-containing resin stabilizer comprising an alkoxycarbonylalkylenetin sulfide	Stabilizers for halogenated resins	Stabilized halogen-containing resin composition	Organotin mercaptoalkanol esters and alkoxides containing sulfide groups	Title
Dieckmann, Dale J.	Minagawa, Motonobu et al.	Bohen, Joseph M.	Minagawa, Motonobu et al.	Dworkin, Robert D. et al.	Inventor
US 4159261	US 4160762	US 4177187	US 4217258	US 4254017	lmage Doc. Displayed

□ US 4120845 A □ US 4132702 A ☐ US RE30032 E □ US 4122065 A US 4122064 A 19781017 19790102 19781024 19781024 19790612 32 22 w = 7 Carbofunctional sulfur and carboxylate bridged tin compounds Sulfide containing tin stabilizers Tin salts of dimercaptoethyl formal, related compounds and PVC resins stabilized therewith Novel organo-tin compounds and Scheidl, Franz their use as stabilizers Phenol esters and amides and polymers stabilized therewith Schmidt, Andreas et al. Kugele, Thomas US 4120845 Bertozzi, Eugene R. Kugele, Thomas US RE30032

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US 4062881 A	□ US 4098763 A	US 4111903 A	US 4115352 A	US 4113678 A	Document ID
19771213	19780704	19780905	19780919	19780912	Issue Date
25	4	Σ	12	12	Pages
Sulfide containing tin stabilizers	Technique for stabilization of vinyl chloride polymers using organic thiols	Organotin compounds and vinyl halide resin compositions stabilized therewith	Heat stabilizer composition for halogenated resins	Tin sulfide stabilizer for styrene polymer	Title
Kugele, Thomas G.	Starnes, Jr., William Herbert	Hoch, Samuel et al.	Bohen, Joseph Michael et al.	Minagawa, Motonobu et al. US 4113678	Inventor
US 4062881	US 4098763	US 4111903	US 4115352	US 4113678	lmage Doc. Displayed

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US 3979359 A	US 4008201 A	US 4020090 A	US 4053659 A	US 4059562 A	Document ID
19760907	19770215	19770426	19771011	19771122	Issue Date
12	=	81	10	œ	Pages
Carbofunctional sulfur and carboxylate bridged tin compounds	Halogenated resins stabilized with Weisfeld, Lewis novel compositions	Organotin compounds	Adherent powder coatings on a basis of PVC copolymers	Liquid stabilizer systems and vinyl Hoch, Samuel et halide resin compositions al.	Title
Kugele, Thomas US 3979359 C. et al.	!	Collins, John Desmond et al.	Gebauer, Peter et al.	Hoch, Samuel et al.	Inventor
US 3979359	US 4008201	US 4020090	US 4053659	US 4059562	lmage Doc. Displayed

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25 24 23 22 21 \boxtimes \boxtimes \boxtimes \boxtimes \boxtimes **C** □ US 3978023 A ☐ US 3972908 A □ US 3943099 A □ US 3933877 A □ US 3933750 A Document ID 19760309 19760120 19760831 19760803 19760120 **Issue Date** Pages u 16 7 0 15 Hydrophilic and difficultly volatile biocidal triorganometallic compounds Stabilization of polymeric compositions Process for stabilising halogenated vinyl resins Novel stabilized polymer compositions Organotin compounds Title Bakassian, Georges et al. Wirth, Hermann US 3933877 Otto et al. Coates, Harold et al. Coates, Harold et al. Collins, John Desmond et al. inventor US 3972908 US 3933750 US 3943099 US 3978023 lmage Doc. Displayed

	С	_	Document ID	Issue Date	Pages	Title	=	Inventor
26	⊠		US 3933744 A	19760120	8	Esters and mixtures thereof with organotin compounds useful as polymer stabilizers	s thereof with nds useful as	s thereof with Coates, Harold US 3933744
27	⊠		A 0893568 SN	19760120	O	Stabilizing compositions for polyvinylchloride		sitions for Wowk, Anatole US 3933680
28	⊠		US 3933741 A	19760120	∞	Stabilized vinyl chloride polymer compositions		loride polymer Larkin, William US 3933741 A. et al.
29			US 3931262 A	19760106	18	Hydrophilic and difficultly volatile biocidal triorganotin compounds		ifficultly volatile Wirth, Hermann US 3931262 tin compounds Otto et al.
30			US 3928284 A	19751223	15	Organotin compounds stabilizers for vinyl halide polymers	abilizers	ymers et al.

	C	-	Document ID	Issue Date	Pages	Title	Inventor	lmage Doc. Displayed
31	⊠		US 3925309 A	19751209	19	Dimethyltin esters	Weisfeld, Lewis B. et al.	US 3925309
32	⊠		US 3919168 A	19751111	=	Vinyl halide resin stabilizer compositions of organotin or antimony organic sulfur-containing compounds and tri-alkali metal phosphates	Dieckmann, Dale J.	US 3919168
33	⊠		US 3925246 A	19751209	7	Esters and mixtures thereof with organotin compounds	Coates, Harold et al.	US 3925246
34	⊠		US 3627717 A	19711214	10	VINYL CHLORIDE EMULSION POLYMERIZATION, COPOLYMERIZATION, AND PRODUCT THEREFROM	Kuhnen, Ludwig US 3627717	us 3627717

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40	⊠		US 3869487 A	19750304	Ō	Alkyltin polysulfide thioesters	Kugele, Thomas US 3869487	US 3869487
41	⊠		US 3865787 A	19750211	9	Resin stabilizer systems of organotin sulfur-containing compounds and alkali metal bisulfite addition products	Ludwig, Jerome H. et al.	US 3865787
42	⊠		US 3856840 A	19741224	5	ORGANOTIN HETEROCYCLIC COMPOUNDS	O'Brien, Joseph L. et al.	US 3856840
43	⊠		□ US 3803083 A	19740409	17	NEW SYNERGISTIC ORGANOTIN MERCAPTOCARBOXYLIC ACID ESTER STABILIZERS	Brecker, Lawrence Robert	US 3803083
44	⊠		□ US 3818062 A	19740618	V	UNSATURATED ORGANI-TIN MERCAPTIDES, THEIR PREPARATION AND USE	Bakassian, Georges	US 3818062

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45	⊠		□ US 3764571 A	19731009	21	ORGANOTIN STABILIZER SYSTEMS	Jennings, Thomas C. et al. US 3764571	US 3764571
46	⊠		US 3758536 A	19730911	6	PROCESS FOR PREPARING POLYMERIC HALO TIN THIOHYDROCARBYL CARBOXYLATES	Wowk, Anatole	US 3758536
47	⊠		□ US 3697566 A	19721010	10	NOVEL ORGANO-TIN COMPOUNDS	Sassa, Atsuo et al.	US 3697566
48	⊠		□ US 3665025 A	19720523	6	ORGANO(HALO) DISULFUR TIN DERIVATIVES AND THE PROCESS OF PREPARING THE SAME	Wowk, Anatole	US 3665025
49	⊠		□ us 3627718 A	19711214	7	POLYVINYL CHLORIDE COMPOSITIONS FOR THE PRODUCTION OF ANTISTATIC HOLLOW BODIES AND BLOWN FILMS	Seifert, Friedrich et al.	US 3627718

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□ US 3665024 A 19720523	Document ID
	Issue Date
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DIALKYLTIN BIS(SUBSTITUTED MERCAPTIDES)	Title
Oakes, Vincent et al.	Inventor
US 3665024	lmage Doc. Displayed

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6	⊠		US 4113678 A	19780912	12	Tin sulfide stabilizer for styrene polymer	Minagawa, Motonobu et al.	US 4113678
7	⊠		US 4008201 A	19770215	=	Halogenated resins stabilized with Weisfeld, Lewis novel compositions		US 4008201
8	⊠		US 3979359 A	19760907	12	Carbofunctional sulfur and carboxylate bridged tin compounds	Kugele, Thomas G. et al.	US 3979359
9	⊠		US 3933750 A	19760120	13	Novel stabilized polymer compositions	Coates, Harold et al.	US 3933750
10	⊠		NS 3933680 A	19760120	Ō	Stabilizing compositions for polyvinylchloride	Wowk, Anatole	US 3933680

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□ US RE30810 E	□ US 3665025 A	□ US 3758536 A	US 3879344 A	US 3899465 A	Document ID
19811201	19720523	19730911	19750422	19750812	Issue Date
12	6	6	Ó	7	Pages
Carbofunctional sulfur and carboxylate bridged tin compounds	ORGANO(HALO) DISULFUR TIN DERIVATIVES AND THE PROCESS OF PREPARING THE SAME	PROCESS FOR PREPARING POLYMERIC HALO TIN THIOHYDROCARBYL CARBOXYLATES	Unsaturated organo-tin mercaptide stabilizers for halo-vinyl polymers	Synergistic organotin stabilizer Stapfer, compositions and resins stabilized Christian H. therewith	Title
Kugele, Thomas US RE30810	Wowk, Anatole	Wowk, Anatole	Bakassian, Georges	Stapfer, Christian H.	Inventor
US RE30810	US 3665025	US 3758536	US 3879344	US 3899465	lmage Doc. Displayed

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□ US 4080362 A	□ US 4231895 A	Document ID
19780321	19801104	Issue Date
4	18	Pages
Organotin stabilizers	Synergistic heat stabilizer CM compositions containing an DN antimony or a bismuth compound D.	Title
Hutton, Ronald E. et al.	Dworkin, Robert US 4231895 D.	Inventor
US 4080362	US 4231895	lmage Doc. Displayed

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□ US 4125500 A	□ us 4132702 A	US 4177187 A	□ US 4217258 A	US 4256618 A	Document ID
19781114	19790102	19791204	19800812	19810317	Issue Date
8	32	8	15	14	Pages
Cyclic phosphites of sugar alcohols and polymers stabilized therewith	Phenol esters and amides and polymers stabilized therewith	Stabilizers for halogenated resins	Stabilized halogen-containing resin composition	Antimony mercaptocarboxylic acid Brecker, or ester-mercaptocarboxylic acid Lawrence R. et ester stabilizers for rigid polyvinyl al. chloride resin compositions	Title
Mayer, Norbert et al.	Schmidt, Andreas et al.	Bohen, Joseph M.	Minagawa, Motonobu et al.	Brecker, Lawrence R. et al.	Inventor
US 4125500	US 4132702	US 4177187	US 4217258	US 4256618	lmage Doc. Displayed

 \boxtimes \boxtimes \boxtimes \boxtimes \boxtimes _ □ US 4021407 A □ US 4059562 A □ US 4058543 A □ US 4122064 A US 4115352 A Document ID 19781024 19770503 19771122 19771115 19780919 **Issue Date** Pages 70 28 12 œ 7 Novel organo-tin compounds and Scheidl, Franz their use as stabilizers et al. Synergistic organotin borate/ stabilizer compositions and resins Gough, Robert containing same_________George et al. Heat stabilizer composition for halogenated resins Liquid stabilizer systems and vinyl Hoch, Samuel et US 4059562 halide resin compositions al. Organotin mercapto dicarboxylic acid esters and compositions Title Bohen, Joseph Michael et al. Mack, Gerry P. Inventor US 4058543 US 4122064 US 4021407 US 4115352 lmage Doc. Displayed

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☐ US 3933680 A □ US 3928285 A □ US 3933741 A □ US 3919168 A □ US 3925309 A Document ID 19760120 19760120 19751209 19751111 19751223 **issue Date** œ 0 Pages 19 12 Stabilized vinyl chloride polymer compositions Vinyl halide resin stabilizer compositions of organotin or antimony organic sulfur-containing compounds and Dale J. tri-alkali metal phosphates Synergistic organotin borate stabilizer composition and resins containing same Stabilizing compositions for polyvinylchloride Dimethyltin esters Title Gough, Robert George et al. Larkin, William A. et al. Weisfeld, Lewis B. et al. Wowk, Anatole US 3933680 Inventor US 3925309 US 3928285 US 3933741 US 3919168 lmage Doc. Displayed

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16	⊠		□ US 3925246 A	19751209	7	Esters and mixtures thereof with organotin compounds	Coates, Harold et al.	US 3925246
17	☒		□ US 3917672 A	19751104	14	Hydroxybenzoylalkanoic acid esters	Schmidt, Andreas	US 3917672
18	⊠		US 3899465 A	19750812	7	Synergistic organotin stabilizer compositions and resins stabilized Christian H. therewith		US 3899465
61	⊠		US 3865787 A	19750211	9	Resin stabilizer systems of organotin sulfur-containing compounds and alkali metal bisulfite addition products	Ludwig, Jerome H. et al.	US 3865787

	Brecker, Lawrence R. et	sulfides and nlymecaptides itons for		19810310	US 4255320 A	22
us 3627716	Cohen, Seymour	POLYVINYL CHLORIDE RESIN STABILIZER COMBINATION COMPRISING A TETRAVALENT ORGANOTIN MERCAPTOCARBOXYLIC ACID COMPOUND AND A DIVALENT STANNOUS TIN SALT	16	19711214	□ US 3627716 A	 21
US 3803083	Brecker, Lawrence Robert	NEW SYNERGISTIC ORGANOTIN MERCAPTOCARBOXYLIC ACID ESTER STABILIZERS	17	19740409	A 880508E SN	20
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US 3899465 A	US 3933680 A	US 4021407 A	US 4122064 A	US 41 771 87 A	Document ID
19750812	19760120	19770503	19781024	19791204	Issue Date
7	<u>o</u>	10	7	&	Pages
Synergistic organotin stabilizer Stapfer, compositions and resins stabilized Christian H.	Stabilizing compositions for polyvinylchloride	Synergistic organotin borate stabilizer compositions and resins containing same	Novel organo—tin compounds and their use as stabilizers	Stabilizers for halogenated resins	Title
	Wowk, Anatole	Gough, Robert George et al.	Scheidl, Franz et al.	Bohen, Joseph M.	Inventor
US 3899465	US 3933680	US 4021407	US 4122064	us 4177187	lmage Doc. Displayed